



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,742	09/29/2000	Frank Sacca	00CXT0030C	2293
25700	7590	02/06/2004	EXAMINER	
FARJAMI & FARJAMI LLP 16148 SAND CANYON IRVINE, CA 92618			JAMAL, ALEXANDER	
			ART UNIT	PAPER NUMBER
			2643	11

DATE MAILED: 02/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/676,742

Applicant(s)

SACCA, FRANK

Examiner

Alexander Jamal

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 2,14,17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-13,15,16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Withdrawal of Rejections and Claims

1. Based upon the submitted amendments, examiner withdraws objections from the prior office action (8-8-2003) to the Specification.
2. Examiner notes that applicant has withdrawn **Claims 2,14,17** from consideration.

Response to Arguments

3. Regarding applicant's argument concerning the recited elements of Pitsch and Rahamim as per the amended **claim 1**. Please see below for the 35 U.S.C. 103 rejection to the newly amended claim 1 which relies upon the same arguments and prior art as the original office action (8-8-2003).
4. Regarding applicant's argument concerning the motivation to combine the Pitsch and Ramahim references. The examiner provided the motivation to combine the voltage clamping device described by Pitsch in the (8-8-2003) office action (Page 3). The motivation to add the protection scheme to the invention of Rahamim is to protect the modem side circuitry. The examiner asserts that this is a valid motivation even though Rahamim already discloses a high voltage protection scheme, because it is common to provide multiple levels of protection for sensitive circuitry (especially for communications devices that humans come into direct contact with). The metal oxide varistor disclosed by Rahamim that is subject to high voltage strikes may

Art Unit: 2643

wear down or cease to function over time as it experiences multiple high voltage transients. The protection scheme taught by Pitsch will provide a second level of protection for any transients that may strike the modem in the event of the failure of the metal oxide varistor disclosed by Rahamim. In addition, assuming both protectors are rated to fire at the same voltage level, the modem-side circuitry voltage protection will fire before Rahamim's metal oxide varistor if any transients strike on the modem-circuitry side of the diode bridge (because of the voltage drop in the diodes). As such the examiner asserts that there is motivation to combine the teachings of Pitsch with the invention of Rahamim.

5. Regarding applicant's argument concerning the 35 USC 103(a) rejection of **claims 2-4**. Claim 2 has been withdrawn by the applicant. Please see the claim rejections below concerning claims 3 and 4.

6. Regarding applicant's argument concerning the 35 USC 103(a) rejection of **claim 13**. Please see the arguments in items 3 and 4, as well as the claim rejections below.

7. Regarding applicant's argument concerning the 35 USC 103(a) rejection of **claim 15**. Please see the claim rejections below.

8. Regarding applicant's argument concerning the 35 USC 103(a) rejection of **claims 16, 18-20**. Please see the arguments in items 3 and 4, as well as the claim rejections below.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2643

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1,3-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Rahamim et al. (6351530), and further in view of Pitsch (6163447) and Hill et al. (5642416).

a. Claim 1: Rahamim discloses a data access arrangement comprising:

- i. Network interface circuitry 114: (Fig. 4A, Col. 4, lines 33-42)
- ii. Diode Bridge 310 with a first pair of terminals coupled to the network and a second pair of terminals coupled to the network interface circuitry: (Fig. 4B, Col. 9, lines 44-50).

But Rahamim does not disclose:

- (1) A high voltage-clamping device disposed between the second pair of diode bridge terminals coupled to the network interface circuitry
- (2) A first capacitor coupled between a modem circuit side terminal and ground, and a second capacitor coupled between the other modem circuit side terminal and chassis ground.

Pitsch teaches that telephone and modem equipment may experience damaging signal conditions which may expose the interface circuitry to an over voltage condition

(Col 1 lines 12-30). He discloses sidactor™ S coupled across the terminals of the diode bridge on the network interface side (Fig. 1, Col. 4, lines 15-24). It would have been obvious to one of ordinary skill in the art at the time of this application to utilize a high-voltage clamping device in the same way as Pitsch in order to protect the modem circuitry from an over-voltage condition.

Hill teaches that telephone equipment is often used in environments with RF signals that may interfere with or disable the equipment. Hill teaches a solution of adding capacitors (Fig. 1: C1, C2) from each terminal such that the effective impedance to earth at each capacitor is much less than the impedance of the signal path caused by the mutual capacitance of the telephone device casing to earth ground. This will allow the RF signal to pass around the sensitive circuitry instead of an unknown or undesired path through the circuitry (Col 4, lines 35-52). It would have been obvious to one of ordinary skill in the art at the time of this application to place two capacitors, one from each terminal of the diode bridge to chassis ground directly before the active circuitry of the data equipment in order to reduce unwanted RF signals in the active circuitry.

b. Claim 3: In Fig. 4B Rahamim discloses a data access arrangement with a high voltage-clamping device 308 disposed between the first pair of terminals (coupled to network connection 190) of diode bridge 310.

c. Claim 4: In Fig. 4B Rahamim discloses capacitors 304 and 306 coupled between chassis ground and the first pair of terminals of diode bridge 310.

- d. **Claim 5:** Rahamim discloses a telephone connection 190 (Fig. 4B). He also mentions that the data access arrangement may receive signals through a standard connection such as an RJ-11 jack (Col. 2 lines 12-14).
- e. **Claim 6:** Rahamim mentions that the voltage clamping device 308 (Fig. 4B) used could be either a metal oxide varistor or a Sidactor™. It would have been obvious to one of ordinary skill in the art at the time of this application that the voltage clamping device described in applicant's Claim 1, and disclosed by Pitsch could have been a metal oxide varistor instead of a Sidactor™.
- f. **Claim 7:** The high voltage clamping device described by Pitsch is a Sidactor™ (Col. 3, lines 45-50).
- g. **Claim 8:** Rahamim and Pitsch disclose applicant's claim 1, but they do not mention a specific voltage and current rating of the voltage clamping device being used. Since the device is meant to protect the surrounding circuitry from transient surges in voltage/current, it would have been obvious to one of ordinary skill in the art at the time of this application to select the maximum rated values of the voltage clamping device such that the surrounding circuitry is not damaged during a voltage/current transient.
- h. **Claim 9:** Rahamim discloses:
 - i. In, Fig. 1, system side circuitry 104 which can communicate with a host system interface 116 (Col. 3, lines 13-22).
 - ii. In Fig. 1, a high voltage isolation barrier 100 between network interface circuitry 114 and system side circuitry 104.

Art Unit: 2643

- i. **Claim 10:** Rahamim's high voltage isolation barrier 100 (Fig. 3B), is comprised of capacitor 200.
 - j. **Claim 11:** Rahamim discloses a data access arrangement with programmable line driver circuitry 160, and line/ring impedance circuitry 162 (Fig. 4A). He mentions that the programmability can facilitate compliance with a variety of regulatory standards (Col. 8, lines 25-39) that would include xDSL modem standards.
 - k. **Claim 12:** In Fig. 2, Rahamim's data access arrangement comprises transceiver 132, and protocol framing/control unit 138 that format incoming and outgoing data. This allows the system to operate in compliance with a home networking protocol (Col. 5 lines 60-65, also in appendix A).
4. **Claims 13,15** rejected under 35 U.S.C. 103(a) as being unpatentable over Rahamim et al. (6351530), and further in view of Pitsch (6163447), Ausmus (WO 9854813), and Hill et al. (5642416).
- a. **Claim 13:** Rahamim discloses a data access arrangement comprising:
 - i. Network interface circuitry 114: (Fig. 4A, Col. 4, lines 33-42)
 - ii. Diode Bridge 310 with a first pair of terminals coupled to the network and a second pair of terminals coupled to the network interface circuitry: (Fig. 4B, Col. 9, lines 44-50).

But Rahamim does not disclose:

- (1) A first and second high voltage-clamping device disposed between a first and second terminal of the second pair of diode bridge terminals and ground.
- (2) A first capacitor coupled between a modem circuit side terminal and ground, and a second capacitor coupled between the other modem circuit side terminal and chassis ground.

Pitsch teaches that telephone and modem equipment may experience damaging signal conditions which may expose the interface circuitry to an over voltage condition (Col 1 lines 12-30). He discloses sidactor™ S coupled across the terminals of the diode bridge on the network interface side (Fig. 1, Col. 4, lines 15-24).

Ausmus teaches that high voltage surges can be very damaging to data modems (Pg. 6 lines 4-5). He also teaches that traditional power line filters are applicable in preventing damage to modems from high voltage surges (Pg.2 lines 1-2). He teaches a protection configuration with (in Fig. 1) varistor 32 disposed between data communication line 12 and chassis ground 26, and another varistor 34 disposed between data communication line 14 and chassis ground 26. These varistors protect against over-voltage conditions (pg. 6, lines 20-27). Based on the teachings of Pitsch and Ausmus, it would have been obvious to one of ordinary skill in the art at the time of this application to utilize two varistors (as opposed to Pitsch's one varistor) disposed about the data pair

in the same way as Ausmus, and located in the same spot as Pitsch in order to protect the modem circuitry from an over-voltage condition.

Hill teaches that telephone equipment is often used in environments with RF signals that may interfere with or disable the equipment. Hill teaches a solution of adding capacitors (Fig. 1: C1, C2) from each terminal such that the effective impedance to earth at each capacitor is much less than the impedance of the signal path caused by the mutual capacitance of the telephone device casing to earth ground. This will allow the RF signal to pass around the sensitive circuitry instead of an unknown or undesired path through the circuitry (Col 4, lines 35-52). It would have been obvious to one of ordinary skill in the art at the time of this application to place two capacitors, one from each terminal of the diode bridge to chassis ground directly before the active circuitry of the data equipment in order to reduce unwanted RF signals in the active circuitry.

b. **Claim 15:** Ausmus specifies that the high voltage clamping device is a varistor.

5. **Claims 16 and 18-20** rejected under 35 U.S.C. 103(a) as being unpatentable over Rahamim et al. (6351530), and Pitsch (6163447), and Hill et al. (5642416).

a. **Claim 16:** Rahamim discloses a communication device comprising:

i. Host processing circuitry 116 (Fig. 1).

Art Unit: 2643

- ii. System side circuitry 104 (Fig. 1) that is coupled to host processing circuitry 116.
- iii. Network interface circuitry 114 (Fig. 1).
- iv. Voltage isolation barrier 100 (Fig. 1), coupled between network interface circuitry 114 and system side circuitry 104.
- v. Diode Bridge 310 with a first pair of terminals coupled to the network and a second pair of terminals coupled to the network interface circuitry: (Fig. 4B, Col. 9, lines 44-50).

But Rahamim does not disclose:

- (1) A high voltage-clamping device disposed between the second pair of diode bridge terminals coupled to the network interface circuitry
- (2) A first capacitor coupled between a modem circuit side terminal and ground, and a second capacitor coupled between the other modem circuit side terminal and chassis ground.

Pitsch teaches that telephone and modem equipment may experience damaging signal conditions which may expose the interface circuitry to an over voltage condition (Col 1 lines 12-30). He discloses sidactor™ S coupled across the terminals of the diode bridge on the network interface side (Fig. 1, Col. 4, lines 15-24). It would have been obvious to one of ordinary skill in the art at the time of this application to utilize a high-

voltage clamping device in the same way as Pitsch in order to protect the modem circuitry from an over-voltage condition.

Hill teaches that telephone equipment is often used in environments with RF signals that may interfere with or disable the equipment. Hill teaches a solution of adding capacitors (Fig. 1: C1, C2) from each terminal such that the effective impedance to earth at each capacitor is much less than the impedance of the signal path caused by the mutual capacitance of the telephone device casing to earth ground. This will allow the RF signal to pass around the sensitive circuitry instead of an unknown or undesired path through the circuitry (Col 4, lines 35-52). It would have been obvious to one of ordinary skill in the art at the time of this application to place two capacitors, one from each terminal of the diode bridge to chassis ground directly before the active circuitry of the data equipment in order to reduce unwanted RF signals in the active circuitry.

c. **Claim 18:** Rahamim mentions that the voltage clamping device 308 (Fig. 4B) used could be either a metal oxide varistor or a Sidactor™. It would have been obvious to one of ordinary skill in the art at the time of this application that the voltage clamping device described in applicant's Claim 1, and disclosed by Pitsch could have been a metal oxide varistor instead of a Sidactor™.

d. **Claim 19:** Rahamim discloses a telephone connection 190 (Fig. 4B). He also mentions that the data access arrangement may receive signals through a standard connection such as an RJ-11 jack (Col. 2 lines 12-14).

- e. **Claim 20:** Rahamim's high voltage isolation barrier 100 (Fig. 3B), is comprised of capacitor 200.

Conclusion:

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 703-305-3433. The examiner can normally be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 703-305-4708. The fax phone numbers for the

Application/Control Number: 09/676,742

Page 13

Art Unit: 2643

organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9315 for After Final communications.

AJ
January 28, 2004



DUC NGUYEN
PRIMARY EXAMINER